

WHAT IS CLAIMED IS:

1. A lead, comprising:
a lead body having a proximal end and a distal end,
and the lead body having at least one expansion section;
at least one connector positioned proximate the
5 proximal end;
at least one electrode positioned proximate the distal
end; and
at least one conductor extending through the lead body
and electrically connecting the connector and the
10 electrode.
2. The lead in accordance with Claim 1 wherein the
expansion section is formed by heating at least a portion
of the lead body.
3. The lead in accordance with Claim 1 wherein a
15 diameter of the expansion section is greater than a
diameter of an adjacent portion of the lead body.
4. The lead in accordance with Claim 3 wherein the
diameter of the expansion section is at least about two
times greater than the diameter of the adjacent portion.
- 20 5. The lead in accordance with Claim 1 wherein the
lead body comprises a plurality of expansion sections and
two adjacent expansion sections are spaced apart less than
one inch.

6. The lead in accordance with Claim 1 wherein the expansion section forms an expansion ring around the lead body.

7. The lead in accordance with Claim 6 wherein the
5 at least one conductor is substantially conformal within the expansion ring.

8. The lead in accordance with Claim 1 wherein the expansion section functions to allow expansion of the lead body in a longitudinal direction.

10 9. The lead in accordance with Claim 9 wherein the expansion section provides increased elasticity of the lead body.

10. The lead in accordance with Claim 1 wherein the expansion section is bubble-shaped.

11. A lead, comprising:

a lead body having a proximal end and a distal end,
and the lead body having at least one section comprising
means for expanding;

5 at least one connector positioned proximate the
proximal end;

at least one electrode positioned proximate the distal
end; and

at least one conductor extending through the lead body
10 and electrically connecting the connector and the
electrode.

12. The lead in accordance with Claim 11 wherein the
means for expanding comprises an expansion section wherein
a diameter of the expansion section is greater than a
15 diameter of an adjacent portion of the lead body.

13. The lead in accordance with Claim 11 wherein the
means for expanding comprises a plurality of expansion
sections.

14. The lead in accordance with Claim 11 wherein the
20 means for expanding functions to allow expansion of the
lead body in a longitudinal direction.

15. A method of manufacturing a lead, comprising:
providing a lead body having a first diameter and a
proximal end and a distal end, the lead body having at
least one conductor extending through the lead body; and
5 forming at least one expansion section within the lead
body.

16. The method in accordance with Claim 15 wherein a
portion of the expansion section has a second diameter, the
first diameter less than the second diameter.

10 17. The method in accordance with Claim 15 wherein
forming the at least one expansion section comprises:
heating at least a portion of the lead body to a
predetermined temperature to form the expansion section.

18. The method in accordance with Claim 17 wherein a
15 portion of the expansion section has a second diameter, the
first diameter less than the second diameter.

19. The method in accordance with Claim 17 further
comprising:
compressing the heated portion of the lead body to
20 form the expansion section.

20. The method in accordance with Claim 1 wherein a
portion of the expansion section has a second diameter, the
first diameter less than the second diameter.

21. A lead manufactured in accordance with the method
25 as defined in Claim 15.

22. A system for stimulating a portion of a body, the system comprising:

- a source for generating a stimulus; and
- an implantable lead for receiving the stimulus from
5 the source, the implantable lead comprising,
 - a lead body having a proximal end and a distal end, and the lead body having at least one expanding section,
 - at least one connector positioned proximate the
10 proximal end,
 - at least one electrode positioned proximate the distal end, and
 - at least one conductor extending through the lead body and electrically connecting the connector and the
15 electrode.

23. The system in accordance with Claim 22 further comprising:

- a controller operable for communicating with the source and controlling the source.

20 24. The system in accordance with Claim 22 wherein the source comprises an RF receiver.

25. The system in accordance with Claim 22 wherein the source comprises an implantable pulse generator.

26. A system for stimulating a portion of a body, the system comprising:

a source for generating a stimulus; and
an implantable lead for receiving the stimulus from the
5 source, the implantable lead comprising,

a lead body having a proximal end and a distal
end, and the lead body having at least one section
comprising means for expanding,

at least one connector positioned proximate the
10 proximal end,

at least one electrode positioned proximate the
distal end, and

at least one conductor extending through the lead
body and electrically connecting the connector and the
15 electrode.